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Hydrographic Map

OF

LAKE MENDOTA,

DANE COUNTY, WIS.

Showing also the Adjacent Topography.

Wisconsin University

Survey in Charge of L. S. Smith.

MADISON, WISCONSIN,
1900.

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Explanation of Map.

THIS MAP shows by means of contour lines and by tinting, the depth of the water in Lake Mendota and the shape of its bottom, and also by means of contour lines printed in brown, the topography of the shore of the lake. The topography and the hydrography adjacent to the shore are mainly the work of students in the Civil Engineering course of the University of Wisconsin, and were made by the classes of 1897, 1898, 1899, and 1900. The hydrography of the open water of the lake was prepared from surveys made by the Geological and Natural History Survey. The observations for the shore hydrography were made by means of lines of soundings run normal to the shore at close intervals, extending as far out as stadia rod could be easily read—perhaps one third of a mile. The soundings for the hydrography for the deeper part of the lake were made through the ice; the position of each sounding being determined by exact measurements. Several thousand soundings have been made and were used in the preparation of the map.

The contour lines on the map show intervals of five feet in depth. The line marked "5" is drawn through the points where the water is five feet deep, and indicates what the outline of the lake would be if the surface were lowered five feet. The next line to this marks the depth of ten feet, and so on of the succeeding lines. The space between any line and that next inside of it indicates the distance required for the depth of water to increase five feet. The lines serve, therefore, to indicate the slope of the bottom, as well as the depth of the water. Where the lines are close together, as off the end of Picnic Point, north of Second Point, and southwest of Governor's Island, the slope of the bottom is steep. Where they are far apart, as in the central part of the lake, the slope of the bottom is correspondingly gradual.

It will be seen that the bottom of Lake Mendota presents a large central plane below the 60 foot level, so level that the eye would distinguish no irregularities upon it if it were elevated above the water. This level area is divided into two portions. The larger part, in the center of the lake, is nearly two and a half miles long and about two miles in width. A smaller area extends from this toward the west.

Four main shoals are found in the lake: one about due north of the Capitol, at the distance of something more than three-fourths of a mile from the nearest point of shore and having a depth of 8 feet at the shallowest point, with nearly 30 feet of water between shoal and shore. The second shoal lies nearly half a mile south of Governor's Island and has a depth of about 10 feet, with a depth of a little more than 25 feet between the shoal and Governor's Island. Northwest of Second

CONTINUED ON PAGE 4.

HYDROGRAPHIC MAP
OF
LAKE MENDOTA, DANE CO., WISCONSIN
AND OF ITS
ADJACENT TOPOGRAPHY

PREPARED FROM SURVEYS MADE BY

CIVIL ENGINEERING STUDENTS, UNIVERSITY OF WISCONSIN

CLASSES 1897, 8, 9, 0,

AND BY THE

WISCONSIN GEOLOGICAL AND NATURAL HISTORY SURVEY

E. A. BIRGE, PH. D., DIRECTOR.

Hydrography and Cartography in charge of L. S. Smith, C. E.

Contour Interval of the Hydrography = 5 Ft.
Contour Interval of the Topography = 10 Ft.
Datum Plane is Lake Level.

20 FT.
40 "
60 "

Scale in Miles
0 ¼ ½ ¾ 1 MILE

Scale in Meters
200 100 0 200 400 600 800 1000

1900.

Area of Lake is 15.2 sq. miles.
Circumference is 21.9 miles.
Elevation above the Sea 846 ft.
Greatest depth 84 ft.

Cross-section along the line of Wisconsin-Monona Ave.

Governor's Isl. — Maple Bluff

Lake Mendota, [Ele. 846.5] — Lake Monona [Elevation 841.5]

Note: The horizontal scale of the cross-sections shown is the same as that of the map, but the vertical scale is magnified four times.

Cross-Sections

Fox's Bluff — Eagle Heights
Fox's Bluff — Second Point
Picnic Pt. — Outlet of Lake
Picnic Pt. — Governor's Island

CATFISH RIVER
SIX MILE CREEK
THE CHUMS
MORRIS PARK
FARWELL'S POINT
WOODWARDS GROVE
STATE HOSPITAL FOR THE INSANE
MENDOTA STA.
CHURCH
ROCKY ISLAND
GOVERNOR'S ISLAND
MAPLE BLUFF
CHICAGO AND NORTHWESTERN R. R.
PORTAGE DIVISION CHICAGO MILWAUKEE AND ST. PAUL R.R.
PHEASANT BRANCH
WEST POINT
FOX'S BLUFF
MIDDLETON 1¼ MILES
SPRING
MENDOTA BEACH
MINNIWAKAN SPRING
MERRILL PARK
SPRING PARK
SECOND POINT
EAGLE HEIGHTS
BLACK BANK
PICNIC POINT
MENDOTA HEIGHTS
PRAIRIE DU CHIEN DIVISION CHICAGO MILWAUKEE AND ST. PAUL RAILWAY
UNIVERSITY BAY
UNIVERSITY OF WISCONSIN
UNIVERSITY HEIGHTS
CAMP RANDALL U. of W.
RANDALL PARK
CENTRAL ILLINOIS R.R.
WINGRA PARK
OAKLAND HEIGHTS
GREENBUSH
C. M. & St. P. R.R. DEPOT
TENNEY PARK
OLBRICH PARK
MADISON
LAKE MONONA
Greatest Depth = 74.8 Ft.

LAT. 43° 4'

1 minute of latitude equals 6074 feet or 1.15 miles.
1 minute of longitude equals 4452.8 feet

Longitude 89° 26' west of Greenwich

Point lies the third shoal, over which the water is about 17.4 feet deep; and north of Eagle Heights is the fourth shoal, with a depth of about 20 feet of water. Southwest of Governor's Island is a small hole with very steep sides, around which the water is about 60 feet in depth, and which extends down to a depth of 84 feet. This is the deepest water in the lake; deep water in the larger basin of the lake not exceeding 80 feet.

In order to make the shape of the basin more apparent to the eye, it has been colored in four tints: the palest tint indicating the depth down to 20 feet; the second tint extending to 40 feet; the third to 60; while the deepest tint is given to the deep water below the 60 foot level.

The topography of the shore of the lake is indicated by means of contour lines placed at intervals of 10 feet. It will be seen that the highest hills reach a height of about 150 feet; that elevation being attained by Eagle Heights and Mendota Heights.

In the cross sections the horizontal scale is the same as that of the map but the vertical scale has been magnified four times. If the vertical scale were the same as the horizontal, little could be seen of the contour of the bottom, since the lake is so shallow in proportion to its area. It must be remembered that the enlargement of the vertical scale increases correspondingly the steepness of the slope of the bottom and banks, as shown in the sections.

Lake Monona is about five feet below Lake Mendota. About four feet of this difference is due to the dam at the outlet of Lake Mendota. The contour lines shown in Lake Monona give the depth of water below the level of the shore of that lake and not the depth below the level of the water in Lake Mendota. The plane from which the depth of the water in each lake is measured is its own water level, while the land contours are referred to the level of Lake Mendota.